

Docket No.: 4040/1K201US2  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Mark I. Greene, et al.

Application No.: Not Yet Assigned

Group Art Unit: 1653

Filed: Concurrently Herewith

Examiner: A. Mohamed

For: METHODS OF INHIBITING OSTEOCLAST  
ACTIVITY

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

In order to comply with the duty to disclose information under 37 C.F.R. § 1.56, Applicants submit herewith an Information Disclosure Statement pursuant to 37 C.F.R. § 1.97 and 1.98. In particular, Applicants submit herewith a Form PTO/SB/08a (Substitute to Form PTO-1449) listing references AA-DJ for consideration by the Examiner. This application is a divisional of U.S. patent application Serial No. 09/628,665 filed July 28, 2000 ("the '665 application"). To avoid overburdening the Examiner, copies of the references cited in this IDS are not submitted herewith, as the references are already of record in the '665 application. However, Applicants will gladly provide copies of the cited references to the Examiner upon request.

Applicants are submitting this IDS concurrently with the present divisional application and in accordance with 37 C.F.R. § 1.97(b). It is therefore believed that no fee is required for this submission. However, should the U.S. Patent and Trademark Office determine that any fee is required or that any refund is due for this application, the Commissioner is hereby authorized and

requested to charge any required fees and/or credit any refunds due to our Deposit Account No. 04-0100.

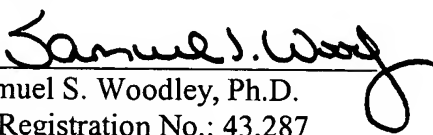
It is requested that each document cited (including any reference or other document cited in Applicant's specification which is not repeated in the attached Form PTO/SB/08a) be given thorough consideration by the Examiner, and that it be cited of record in the prosecution history of this application by initialing Form PTO/SB/08a next to the document. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection or otherwise does not consider it to be prior art for any reason. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

Although this Information Disclosure Statement is being submitted in compliance with 37 C.F.R. § 1.56, the citation of a document in the accompanying Form PTO/SB/08a is not to be construed as an admission that such document is necessarily relevant or that the document is prior art to the present application. No representation is intended that the cited documents represent the result of a complete search, and it is anticipated that the Examiner, in the normal course of examination, will make an independent search and will determine the best prior art consistent with 37 C.F.R. §§ 1.104(a) and 1.106(b).

Early and favorable consideration is earnestly solicited.

Dated: July 22, 2003

Respectfully submitted,

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Substitute for form 1449/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	Not Yet Assigned
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				First Named Inventor	Mark I. Greene
				Art Unit	1653
				Examiner Name	A. Mohamed
Sheet	1	of	3	Attorney Docket Number	4040/1K201US2

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	AA.	4,215,051	7/29/80	Schroeder et al.	
	AB.	4,946,778	8/7/90	Ladner et al.	
	AC.	5,470,952	11/28/95	Stahl et al.	
	AD.	5,849,865	12/15/98	Cheng et al.	
	AE.	5,955,425	9/21/99	Morley et al.	
	AF.	5,985,832	11/16/99	Roodman et al.	
	AG.	5,869,452	2/9/99	Ng et al.	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
	AH	EP 0 045 665	5/8/81			
	AI	WO 98/53842	12/3/1998			
	AJ	WO 99/58674	11/18/99			

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	AK	Ahmed et al., The Journal of Biological Chemistry, 250(21):8477-8482, November 1975			
	AL	Albericio et al., Int. J. Peptide Protein Res. 26:92-97, 1985			
	AM	Anderson et al. Nature, Vol. 390, pp. 175-179, November 13, 1997			
	AN	Banner et al., Cell, 73:431-445, May 1993			
	AO	Beutler et al., Science, 264:667-668, April 1994			
	AP	Beutler et al., Annals of The New York Academy of Sciences, 730:118-133, 1994			
	AQ	Bowie et al. Science, Vol. 247, pp. 1306-1310, 1990			
	AR	Brisson et al., Nature, 310:511-514, August 1984			
	AS	Broglie et al., Science 224:838-843, May 1984			
	AT	Bucay et al., Genes Dev., 12(9):1260-1268, 1998			
	AU	Cole et al., Monoclonal Antibodies and Cancer Therapy, 77-96, January-February 1985			
	AV	Coruzzi et al., The EMBO Journal 3(8):1671-1679			
	AW	Cote et al., Proc. Natl. Acad. Sci. USA, 80:2026-2030, 1983			
	AX	Döring et al., Molecular Immunology, 31(14):1059-1067, 1994			
	AY	Filvaroff, Current Biology, 8:R679-682, 1998			
	AZ	Fox et al. Biochem. Biophys. Res. Comm., Vol. 276, pp. 868-872, 2000			

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			Art Unit	1653	
			Examiner Name	A. Mohamed	
Sheet	2	of	3	Attorney Docket Number	4040/1K201US2

BA	Fingl et al., "General Principles," In: The Pharmacological Basis of Therapeutics, Chapter 1, 1-46, 1975
BB	Fuller, K., et al., "TRANCE is necessary and sufficient for osteoblastmediated activation of bone resorption in osteoclasts," <i>Database Chemical Abstracts on STN, No. 129:314804</i> , Abstract, J. Exp. Med., 1998, 188(5), 997-1001
BC	Gruss et al., Cytokines and Molecular Therapy 1:75-105, May 1995
BD	Gurley, et al., Molecular and Cellular Biology, 6:559-565, February 1986
BE	Habeeb, A.F.S.A., Analytical Biochemistry, 56:60-65, 1973
BF	Hann et al., J. Chem. Soc. Perkin Trans., I, 307-314, 1982
BG	Holladay et al. Tetrahedron Letters, 24(41):4401-4404, 1983
BH	Houghten et al. Cell, Vol. 93, pp. 165-176, April 17, 1998
BI	Houghten et al., Vaccines 86, Cold Spring Harbor Laboratory, pp. 21-25, 1986
BJ	Hruby et al., Life Sciences, 31:189-199, 1982
BK	Hudson et al. Int. J. Protein Res., 14:177-185, 1979
BL	Huse, et al., Science, 246:1275-1281, December 1989
BM	Jennings-White et al., Tetrahedron Letters, 23(25):2533-2534, 1982
BN	Kamber et al., Helvetica Chimica Acta, 63(Fasc. 4):899-915, 1980
BO	Kobayashi et al., J. Exp. Med., Vol. 191, No. 2, 275-285
BP	Köhler et al., Nature, 256:495-497, 1975
BQ	Kong et al., Immunology and Cell Biology, 77:188-193, January 1999
BR	Kong et al., Nature, 397:315-323, 1999
BS	Kornak et al., Cell, 104:205-215, 2001
BT	Kozbor et al., Immunology Today, 4(3):72-79, 1983
BU	Lacey et al., Amer. J. of Pathology, 157(2):435-448, 2000
BV	Li Y.P. et al., Nature Genetics, 23:447-451, 1999
BW	Li J. et al., PNAS, 97(4):1566-1571, 2000
BX	Livingstone, David M., Methods in Enzymology, Affinity Techniques, 723-731, 1974
BY	Logan et al., Proc. Natl. Acad. Sci. USA, 81:3655-3659, June 1984
BZ	Mackett et al., Proc. Natl. Acad. Sci. USA 79:7415-7519, December 1982
CA	Mackett et al., Journal of Virology, 49(3):857-864, March 1984
CB	McOsker et al., J. Bone & Mineral Research, Twelfth Annual Meeting of the American Society for Bone and Mineral Research, 5(Supp 2):S105, No. 128, Abstract, Aug. 28-31, 1990
CC	Moore et al., Techniques in Protein Chemistry VII, Marsak (ed.) 81-91, 1996
CD	Morley, J.S., Trends Pharm. Sci., 463-468, December 1980
CE	Morrison et al., Proc. Natl. Acad. Sci. USA, 81:6851-6855, November 1984
CF	Mortensen et al., J. Clinical Endocrinology and Metabolism, 83(2):396-402, 1998
CG	Nakagawa, N., et al., "RANK is the essential signaling receptor for osteoclast differentiation factor in osteoclastogenesis" <i>Database Chemical Abstracts on STN, No. 130:166173</i> , Abstract, Biochem. Biophys. Res. Commun., 1998, 253(2), 395-400
CH	Neuberger et al., Nature, 312:604-608, December 1984
CI	Nicholson et al., J. Clinical Investigation, 78:355-360, August 1986
CJ	Panicali et al., Proc. Natl. Acad. Sci. USA, 79:4927-4931, August 1982
CK	Peppel et al., J. Exp. Med., 174:1483-1489, December 1991
CL	Ponder et al., J. Mol. Biol., 193:775-791, 1987
CM	Scimeca, J.C., Bone, 26(3):207-213, 2000
CN	Shalhoub, V. et al., British J. of Haematology, 111:501-512, 2000

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CO	Shalhoub et al., J. Cellular Biochem., 72(2):251-261, 1999	
CP	Sietsema et al., Drugs Exptl. Clin. Res., XV(9):389-396, 1989	
CQ	Simonet et al., Cell, 89(2):309-319, 1997	
CR	Singer et al., J. Clinical Endocrinology and Metabolism, 83(6):1906-1910, 1998	
CS	Siris et al., J. Bone and Mineral Research, 13(6):1032-1038, 1998	
CT	Smith et al., Journal of Virology, 46:584-593, May 1983	
CU	Spatola, A. F., Chemistry and Biochemistry of Amino Acids, Peptides, and Proteins, 7:267-357, 1983	
CV	Spatola et al., Life Sciences, 38:1243-1249, 1986	
CW	Suda et al., Endocrine Reviews 20(3):345-357, June 1999	
CX	Suda et al., Novartis Found Symp, 232: 235, 2001 (Abstract)	
CY	Takamatsu et al., EMBRO Journal, 6(2):307-311, 1987	
CZ	Takasaki et al., Nature Biotechnology, 15:1266-1270, 1997	
DA	Takeda et al., Nature 314:452-454, 1985	
DB	Tam et al., Synthesis, 955-957, December 1979	
DC	Van Beek E., J. Bone and Mineral Research, 11(10):1492-1497, 1996	
DD	Weitzmann et al., J. of Bone and Mineral Research, 16(2):328-337, 2001	
DE	Williams et al., Immunology, 84:433-439, 1995	
DF	Wong et al. Journal of Leukocyte Biology, 65:715-724, June 1999	
DG	Yamaguchi et al., J. of Biological Chemistry, 273(9):5177-5123, Feb. 28, 1998	
DH	Yasuda et al. Proc. Natl. Acad. Sci. USA., Vol. 95 pp. 3597-3602, March 1998	
DI	Zhang et al., Nature Biotechnology, 14:472-475, April 1996	
DJ	Zhang et al., Nature Biotechnology, 15:150-154, 1997	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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